What is claimed is:

1. An apparatus for blocking the routing of voice calls over an Internet protocol (IP) network when a packet loss measure rises above a threshold, said apparatus comprising:

a terminal configured to transmit voice calls, said terminal being connected to the IP network;

5   a first processor for collecting data on packet loss for each of a plurality of time intervals in a current connection path over the IP network;

a second processor for evaluating the packet loss data according to a predetermined algorithm,

wherein if the results of said evaluation fail to meet a predetermined criterion,

10   future calls over the IP network path are blocked.

2. An apparatus as in claim 1 wherein the functions of the first and second processors are performed by a single processor.

15   3. An apparatus as in claim 1 wherein the calls over the IP network path are blocked for a prespecified duration.

4. An apparatus as in claim 1 wherein said algorithm computes said evaluation of packet loss data for each time interval as a function of the packet loss data for that interval and at least

20   one prior interval.

5. An apparatus as in claim 4 wherein the function is a weighted average.

6. An apparatus as in claim 1 in which said blocking is done only if said packet loss data have been collected for a prespecified minimum call duration.

5   7. An apparatus as in claim 1 in which if in any interval, the collected packet loss datum exceeds a prespecified limiting value, the packet loss for said interval is represented by said limiting value.

8. An apparatus as in claim 5 in which said weighted average for an interval is the

10   weighted average of the packet loss datum for said interval and the value of said weighted average for the prior interval.

9. A method for blocking the routing of voice calls over an IP network when a packet loss measure rises above a threshold, said method comprising the steps:

15   a terminal transmitting voice calls, said terminal being connected to the IP network;

a first processor collecting data on packet loss for each of a plurality of time intervals in a current connection over the IP network;

a second processor evaluating the packet loss data according to a predetermined algorithm, and

20   if the results of the evaluation fail to meet a predetermined criterion, blocking future calls over the IP network path.

10. A method as in claim 9 wherein the functions of the first and second processors are performed by a single processor.

11. A method as in claim 9 wherein the calls are blocked over the IP network path for a prespecified duration.

5 12. A method as in claim 9 wherein said algorithm computes an output for each time interval that is a function of the packet loss data for that interval and at least one prior interval.

13. A method as in claim 12 wherein the function is a weighted average.

10 14. A method as in claim 9 in which said blocking is done only if said packet loss data have been collected for a prespecified minimum call duration.

15. A method as in claim 9 in which if in any interval, the collected packet loss datum exceeds a prespecified limiting value, the packet loss for said interval is represented by said 15 limiting value.

16. A method as in claim 13 in which said weighted average for an interval is the weighted average of the packet loss datum for said interval and the value of said weighted average for the prior interval.

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17. A method as in claim 16 wherein a fraction α between 0 and 1 is specified, and the weights attached to the packet loss datum and to the prior weighted average are α and $1 - \alpha$, respectively.

18. A method as in claim 9 wherein data on packet loss are collected simultaneously on multiple connections over the IP network.

19. A method as in claim 18 wherein data from different connections are evaluated

5 separately.

20. A method as in claim 19 wherein the most recently evaluated connection is consulted to determine whether to block calls.

10 21. A method as in claim 19 wherein an average of evaluations across current connections is consulted to determine whether to block calls.

22. A method as in claim 18 wherein data from different connections are pooled.

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